

34. (Reiterated) The transgenic plant of claim 32 wherein said part is a grain.

35. (Reiterated) The transgenic plant of claim 32 wherein said promoter is a seed or grain maturation-specific promoter.

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36. (Twice Amended) The transgenic plant of claim 35 wherein said promoter is selected from the group consisting of rice glutelins, rice oryzins, rice prolamines, barley hordeins, wheat gliadins, wheat glutelins, maize zeins, maize glutelins, oat glutelins, sorghum kafirins, millet pennisetins, rye secalins, and maize embryo-specific globulin promoters.

37. (Reiterated) The transgenic plant of claim 36 wherein said barley hordein promoter is selected for the group consisting of B1 hordein and D hordein promoters.

38. (Reiterated) The transgenic plant of claim 32 wherein said monocot plant is selected from the group consisting of rice, barley, maize, wheat, oat, rye, sorghum, millet, triticale, turf grass and forage grass.

39. (Reiterated) The transgenic plant of claim 32 wherein said thioredoxin is thioredoxin h.

40. (Reiterated) The transgenic plant of claim 39 wherein said thioredoxin h is selected from the group consisting of barley, wheat and rice thioredoxin h.

41. (Reiterated) The transgenic plant of claim 32 wherein said recombinant nucleic acid further comprises a nucleic acid encoding a signal peptide operably linked to said promoter and said nucleic acid molecule encoding a thioredoxin protein.

42. (Reiterated) The transgenic plant of claim 41 wherein said signal peptide targets expression of the thioredoxin polypeptide to an intracellular body.

43. (Reiterated) The transgenic plant of claim 42 wherein said signal peptide is selected for the group consisting of B1 hordein and D hordein signal peptides.

77. (Reiterated) A transgenic monocot seed or grain comprising a recombinant nucleic acid comprising a promoter active in said seed or grain operably linked to a nucleic acid molecule encoding a thioredoxin polypeptide.

78. (Reiterated) The transgenic seed or grain of claim 77 wherein said promoter is a seed or grain maturation-specific promoter.

79. (Twice Amended) The transgenic seed or grain of claim 78 wherein said promoter is selected from the group consisting of rice glutelins, rice oryzins, rice prolamines, barley hordeins, wheat gliadins, wheat glutelins, maize zeins, maize glutelins, oat glutelins, sorghum kafirins, millet pennisetins, rye secalins, and maize embryo-specific globulin promoters.

80. (Reiterated) The transgenic seed or grain of claim 79 wherein said barley hordein promoter is selected for the group consisting of B1 hordein and D hordein promoters.

81. (Reiterated) The transgenic seed or grain of claim 80 wherein said seed or grain is selected from the group consisting of rice, barley, maize, wheat, oat, rye, sorghum, millet, and triticales seed or grain.

82. (Reiterated) The transgenic seed or grain of claim 77 wherein said monocot thioredoxin polypeptide is thioredoxin h.

83. (Reiterated) The transgenic seed or grain of claim 82 wherein said thioredoxin h is selected from the group consisting of barley, wheat, and rice thioredoxin h.

84. (Reiterated) The transgenic seed or grain of claim 77 wherein said recombinant nucleic acid further comprises a nucleic acid encoding a signal peptide operably linked to said promoter and said nucleic acid molecule encoding a thioredoxin protein.

85. (Reiterated) The transgenic seed or grain of claim 84 wherein said signal peptide targets expression of the thioredoxin polypeptide to an intracellular body.

86. (Reiterated) The transgenic seed or grain of claim 85 wherein said signal peptide is selected for the group consisting of B1 hordein and D hordein signal peptides.

112. (Reiterated) The transgenic plant of claim 38 wherein said plant is rice.

113. (Reiterated) The transgenic plant of claim 112 wherein said thioredoxin is rice thioredoxin.

114. (New) The transgenic plant of claim 38 wherein said plant is barley.

115. (Reiterated) The transgenic plant of claim 114 wherein said thioredoxin is barley thioredoxin.

116. (Reiterated) The transgenic plant of claim 38 wherein said plant is maize.

117. (Reiterated) The transgenic plant of claim 116 wherein said thioredoxin is maize thioredoxin.

118. (Reiterated) The transgenic plant of claim 38 wherein said plant is wheat.

119. (Reiterated) The transgenic plant of claim 118 wherein said thioredoxin is wheat thioredoxin.

120. (Reiterated) The transgenic plant of claim 38 wherein said plant is oat.

121. (Reiterated) The transgenic plant of claim 120 wherein said thioredoxin is oat thioredoxin.

122. (Reiterated) The transgenic plant of claim 38 wherein said plant is rye.

123. (Reiterated) The transgenic plant of claim 122 wherein said thioredoxin is rye thioredoxin.

124. (Reiterated) The transgenic plant of claim 38 wherein said plant is sorghum.

125. (Reiterated) The transgenic plant of claim 124 wherein said thioredoxin is sorghum thioredoxin.

126. (Reiterated) The transgenic plant of claim 38 wherein said plant is millet.

127. (Reiterated) The transgenic plant of claim 126 wherein said thioredoxin is millet thioredoxin.

128. (Reiterated) The transgenic plant of claim 38 wherein said plant is triticale.

129. (Reiterated) The transgenic plant of claim 128 wherein said thioredoxin is triticale thioredoxin.

130. (Reiterated) The transgenic plant of claim 38 wherein said plant is forage or turf grass.

131. (Reiterated) The transgenic plant of claim 130 wherein said thioredoxin is forage or turf grass thioredoxin.

132. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is rice.

133. (Reiterated) The transgenic seed or grain of claim 132 wherein said thioredoxin is rice thioredoxin.

134. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is barley.

135. (Reiterated) The transgenic seed or grain of claim 134 wherein said thioredoxin is barley thioredoxin.

136. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is maize.

137. (Reiterated) The transgenic seed or grain of claim 136 wherein said thioredoxin is maize thioredoxin.
138. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is wheat.
139. (Reiterated) The transgenic seed or grain of claim 138 wherein said thioredoxin is wheat thioredoxin.
140. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is oat.
141. (Reiterated) The transgenic seed or grain of claim 140 wherein said thioredoxin is oat thioredoxin.
142. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is rye.
143. (Reiterated) The transgenic seed or grain of claim 142 wherein said thioredoxin is rye thioredoxin.
144. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is sorghum.
145. (Reiterated) The transgenic seed or grain of claim 144 wherein said thioredoxin is sorghum thioredoxin.
146. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is millet.
147. (Reiterated) The transgenic seed or grain of claim 146 wherein said thioredoxin is millet thioredoxin.
148. (Reiterated) The transgenic seed or grain of claim 81 wherein said seed or grain is tritcale.
149. (Reiterated) The transgenic seed or grain of claim 148 wherein said thioredoxin is tritcale thioredoxin.

REMARKS